Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
High-Cost Universal Service Support	)	WC Docket No. 05-337
	)	
Federal-State Joint Board on Universal Service	)	CC Docket No. 96-45
	)	
	)	
	)	

COMMENTS OF EMBARQ

ON THE

MAY 1, 2007 PUBLIC NOTICE

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SUMMARY OF COMMENTS

Embarq welcomes this opportunity to reiterate to the Joint Board two simple but extremely important facts that must be addressed in the core of any successful reform of high-cost support: (a) under the current system there are certain geographic areas that receive too much support, and (b) there are other geographic areas that receive insufficient support. The excessive support is a function of providing redundant dollars to multiple providers serving the same areas. The insufficient support is a function of continued reliance on implicit subsidies that have been competed away yet remain built into study-area average costs. Fundamental USF reform must address ***both*** of these structural problems, so the Joint Board should consider any and all proposals designed to control fund growth only as part of a larger, more comprehensive plan that does, in fact, address both of them.

Embarq offers the following comments on the issues and proposals in the Public Notice: (1) the Joint Board should recommend the creation of an option of a new targeted support program for underfunded high-cost areas using geographic information system (GIS) technology and network cost modeling; (2) some aspects of reverse auctions may indeed help achieve statutory goals for USF but the current reverse auction proposals fail to address one or both of the core structural problems that must be resolved for high-cost reform to succeed; (3) carriers should retain the option to disaggregate their support, but disaggregation alone will not solve either of the core structural high-cost support problems; (4) the Joint Board should recommend elimination of the "identical support" rule; and (5) the Joint Board should recommend that the Commission can accelerate and extend broadband deployment with targeted support.

The Joint Board should recommend the creation of an option for targeted high-cost support using GIS technology and network cost modeling. Any discussion of GIS technology

and cost modeling in the context of comprehensive USF reform must start with an acknowledgement that, *for many companies*, the current system of using study area averages perpetuates reliance on implicit subsidies that have largely been competed away. For these carriers, the costs associated with fulfilling their carrier-of-last-resort obligations in high-cost areas are often masked from universal service support mechanisms because the need for support is currently calculated based on study areas averages. Serving low-cost areas does not help a carrier recover the cost of deploying telecommunications services in the high-cost areas, however, because competitors flock to low-cost areas. This means that there are no longer the revenues in lower-cost areas that the current USF mechanism assumes are available to cover the higher costs in other areas. Accordingly, while study area averaging may accurately reflect the need for universal service support for some companies, it does not always work as a methodology for calculating the need for high-cost support.

Therefore, Embarq urges the Joint Board to recommend that the Commission make available the option of using a more granular approach to demonstrate the need for support. Otherwise, the Commission will continue to fail to direct specific, predictable, and sufficient support to all areas that are truly uneconomic to serve and, as a result, will harm consumers by inhibiting network investment in high-cost areas and perpetuating the incorrect assumption that implicit subsidies can be relied upon to cover costs in high-cost areas. This option could be made available to any carrier demonstrating significant variation in its costs within a study area.

The Joint Board should recommend that the Commission establish a new program for carriers that do not currently receive sufficient high-cost loop support in one or more of their study areas due to study area averaging. This new program, which could be called the Targeted Support (TS) program, would be an optional program to which each carrier could enter as many

of its unsupported or insufficiently supported study areas as it chose. The TS program would *not* directly draw support away from any other universal service program. Instead, the current rural and non-rural high-cost loop program, along with other USF programs would continue to operate as they do today, or as modified independently by the Commission and the Joint Board.

The Joint Board should also recommend that the TS program be supported through new funding or funding made available through independently-occurring reductions in other programs. Should it choose to do so, the Commission could provide incremental support to the TS program but the program would not necessarily require an increase in total universal service support disbursements. Instead, the TS program could initially be funded through a priority on any universal service support that becomes available through reductions in support to other programs. For example, as the Commission addresses the problem of duplicative support to multiple CETCs, funds should become available to be redirected to the TS program.

Carriers that chose to seek support through the TS program would have their costs calculated using network cost modeling, but this would differ from past experience with cost modeling in two significant ways: (1) companies would have the option not to use models by choosing not to pursue funding through this approach; and (2) in 2007 network cost models are substantially more accurate and in-tune with real-world network costs than was the case in the past. The fact that companies would have the option whether or not to use models is significant because it is consistent with the uncontroversial use of models in telecommunications today, such as permitting but not requiring small, rate-of-return carriers to use the average schedule (which is a model) for rate regulation and USF purposes.

Some aspects of reverse auctions may indeed help achieve statutory goals for USF but the current reverse auction proposals fail to address one or both of the core structural problems

that must be resolved for high-cost reform to succeed. Embarq submits that Verizon's auction proposal addresses one of the structural problems identified above, but fails to address the other. It ignores the problem of non-existent support in many high-cost areas where it is truly needed but it does suggest that reverse auctions for wireless providers may offer benefits by reducing redundant support provided to multiple CETCs in a single area. CTIA's auction proposal fails to resolve either of the core structural problems with high-cost support and it should be rejected. In addition, it is apparent that all of the current auction proposals fail to address one or both of the core structural problems that must be resolved for high-cost reform to succeed.

Carriers should retain the option to disaggregate their support, but disaggregation alone will not solve either of the core structural high-cost support problems. Disaggregation is different from using targeting to calculate the need for support more accurately so as not to overlook high-cost areas that truly need support. The Joint Board suggested that disaggregation might ensure "… that a competitive entrant would receive the targeted support only if it also serves the high-cost regions" and at the same time it would prevent competitors "from receiving greater support than needed to serve relatively low-cost regions …." Embarq submits that the correct way to accomplish both these goals is by re-calculating and re-targeting support at a more granular level, as discussed above, rather than simply taking support amounts as they are currently calculated and distributing them differently. If the need for support is correctly identified and distributed at a granular level, the Joint Board and Commission will have ensured that any competitor receiving support is indeed serving the high-cost areas that required support.

The Joint Board should recommend elimination of the "identical support" rule. The "identical support" rule—under which CETCs receive support based on incumbent carriers' costs rather than their own costs—should be eliminated. Putting aside for the moment the fact

that alleged wireless cost advantages are often the product of regulation—wireless carriers are free to avoid serving high-cost areas unlike ILECs—the cost competition argument for the identical support rule falls apart upon inspection. True competitive neutrality requires that universal service support only go to compensate carriers for providing service in those areas where they would not otherwise go because it is uneconomic to do so. Competitive neutrality will be violated and, ultimately, the entire system of universal service will unravel if competitive ETCs are able to receive comparable support without incurring comparable service obligations across comparable geographical areas, which is precisely what CETCs do. Moreover, there is no reason to assume that the costs incurred by an incumbent wireline carrier as it provides the supported services have any relationship to the affordability—or lack thereof—of wireless service. Therefore there is no logical basis for supporting wireless carriers based on ILEC costs.

The Joint Board should recommend that the Commission can accelerate and extend broadband deployment with targeted support. The Joint Board should recommend that the Commission can and should do substantially more to facilitate broadband deployment. In particular, the Commission should identify and direct support to the underlying networks that serve high-cost areas where broadband deployment is not economically feasible when left to market forces. The Chairman has clearly explained that such support should focus on a single network rather than on the separate policy of promoting competition. Moreover, serious analysis of the incremental cost of deploying broadband will reveal that it is often the legacy telecommunications network that offers the most economical platform that requires the least additional support for broadband deployment in uneconomic, high-cost areas. The Commission can, therefore, best promote broadband deployment through fundamental universal service reform creating adequate support for underlying telecommunications networks.

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EMBARQ COMMENTS ON THE MAY 1, 2007 PUBLIC NOTICE

Embarq is the nation's fourth largest incumbent local exchange carrier (ILEC), and it provides service in 18 states. Embarq's service areas include a broad range of geographies from metropolitan markets, such as Las Vegas, Nevada, to rural markets, such as Pretty Prairie, Kansas and Possum Kingdom, Texas. Embarq is classified as a rural carrier under the standard set forth in the Communications Act in 17 of the 18 states where it provides service (Embarq does not qualify as a rural carrier in Nevada). As an incumbent provider serving customers in many of the most rural and high-cost areas in the country, Embarq appreciates the opportunity to comment on the issues and proposals referenced in the Public Notice.

Embarq also welcomes this opportunity to reiterate to the Joint Board two simple but extremely important facts that must be addressed in the core of any successful reform of high-cost support: (a) under the current system there are certain geographic areas that receive too much support, and (b) there are other geographic areas that receive insufficient support. The excessive support is a function of providing redundant dollars to multiple providers serving the same areas. The insufficient support is a function of continued reliance on implicit subsidies that have been competed away yet remain built into study-area average costs. Fundamental USF reform must address ***both*** of these structural problems, so the Joint Board should consider any

and all proposals designed to control fund growth only as part of a larger, more comprehensive plan that does, in fact, address both issues.

Embarq offers the following comments on the issues and proposals in the Public Notice: (1) the Joint Board should recommend the creation of an option of a new targeted support program for underfunded high-cost areas using geographic information system (GIS) technology and network cost modeling; (2) some aspects of reverse auctions may indeed help achieve statutory goals for USF but the current reverse auction proposals fail to address one or both of the core structural problems that must be resolved for high-cost reform to succeed ; (3) carriers should retain the option to disaggregate their support, but disaggregation alone will not solve either of the core structural high-cost support problems; (4) the Joint Board should recommend elimination of the "identical support" rule; and (5) the Joint Board should recommend that the Commission can accelerate and extend broadband deployment with targeted support.

I. THE JOINT BOARD SHOULD RECOMMEND THE CREATION OF A NEW TARGETED SUPPORT PROGRAM FOR UNDERFUNDED HIGH-AREAS USING GIS TECHNOLOGY AND NETWORK COST MODELING

The Joint Board asks in the May 1 Public Notice "how GIS technology and/or network cost models could be used to more efficiently calculate and target support at more granular levels." It also asks, "Could these tools be used to identify those areas where competition and market forces alone will not result in the provision of services comparable to those available in more urban areas of the country, and thus where support might be most needed?"[1] The short, emphatic, and unequivocal answer is "yes"—GIS technology and network cost modeling can, and should, be used to identify and direct support to those areas where support is truly needed yet

[1] May 1 Public Notice ¶ 5.

currently not provided adequately due to the inherent problems with study area averaging for some companies.

In response to the Joint Board's questions, Embarq explains that: (a) the Joint Board should recommend the creation of a new Targeted Support program for currently underfunded high-cost areas; (b) many carriers incur substantial and unsupported cost challenges providing carrier-of-last-resort service in high-cost areas; and (c) the public interest would be well served by permitting, but not requiring, ETCs to demonstrate and calculate the need for support using GIS technology and network cost modeling at a granular level rather than study area averaging. It must also be emphasized that the Joint Board should recommend, and the Commission should implement, a program of targeted support even if it is determined that overall USF support should increase only modestly, if at all. Identifying the problem and providing at least some support will yield significant public interest benefits.

A. The Joint Board Should Recommend the Creation of a New Targeted Support Program for Currently Underfunded High-Cost Areas.

Any discussion of GIS technology and cost modeling in the context of comprehensive USF reform must start with an acknowledgement that, *for many companies*, the current system of using study area averages perpetuates reliance on implicit subsidies that have, in large part, already been competed away. This is not a problem for all companies; it is a problem for companies whose service areas exhibit significant variation in costs within a study area. For many smaller companies, whose service areas tend to be more uniform in their cost characteristics, the costs of providing the supported services in rural, high-cost areas are reasonably reflected in the average costs they report to regulators. Other companies, however, serve a variety of higher- and lower-cost areas within the same study areas. For these carriers,

the costs associated with fulfilling their carrier-of-last-resort obligations in high-cost areas are often masked from universal service support mechanisms because the need for support is currently calculated based on study areas averages.[2] While this might have been an acceptable approach in the pre-competition era, it fails to meet the statutory requirements for USF in today's competitive environment.

Serving low-cost areas does not help a carrier recover the cost of deploying telecommunications services in the high-cost areas, because competitors flock to low-cost areas. This means that there are no longer the revenues in lower-cost areas that the current USF mechanism assumes are available to cover the higher costs in other areas. Accordingly, while study area averaging may accurately reflect the need for universal service support for some companies, it does not work as a methodology for calculating the need for high-cost support for many others.

Therefore, Embarq urges the Joint Board to recommend that the Commission make available the option of using a more granular approach to demonstrate the need for support, at a wire center or sub-wire center level. Otherwise, the Commission will continue to fail to direct specific, predictable, and sufficient support to all areas that are truly uneconomic to serve and, as a result, will harm consumers by inhibiting network investment in high-cost areas and perpetuating assumption that implicit subsidies can be relied upon to cover costs in higher-cost areas. This option could be made available to any carrier that was able to demonstrate significant variation in its costs within a single study area.[3]

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[2] Or, in the case of multiple non-rural carriers in a state, on statewide averages of study area averages.

[3] The process for demonstrating significant variation in costs within a study area is outlined in Embarq's April 12, 2007 ex parte filing in this docket. Companies could submit wire center level density data to USAC which would evaluate the data, thereby establishing an initial bright

The Joint Board should also recommend that the Commission establish a new program for carriers that do not currently receive sufficient high-cost loop support in one or more of their study areas due to study area averaging. As discussed above, this new program—the Targeted Support (TS) program—would give carriers the option of seeking granular support in any of its unsupported or insufficiently supported study areas. The TS program would *not* directly draw support away from any other universal service program. Instead, the current rural and non-rural high-cost loop program, along with other USF programs would continue to operate as they do today, or as modified independently by the Commission in consultation with the Joint Board.

The TS program would be supported either through new funding or funding made available through independently-occurring reductions in other programs. Should it choose to do so, the Joint Board could recommend that the Commission provide incremental support to the TS program but the program would not necessarily require an increase in total universal service support disbursements. Instead, the TS program could initially be funded by giving it priority on any universal service support that becomes available through reductions in support to other programs. For example, as the Commission addresses the problem of duplicative support to multiple ETCs, that money would be redirected to the TS program, where it would partially (but far from completely) compensate carriers for the cost of providing universal service in rural high-cost areas that do not currently receive support.

B. Many Carriers Incur Substantial and Unsupported Cost Challenges Providing Carrier-of-Last-Resort Service in High-Cost Areas.

The Joint Board should explicitly acknowledge that the cost of deploying and supporting telecommunications networks varies significantly depending on population density, the distance

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line test for whether the company's need for support must be calculated at a more granular level.

over which infrastructure must be deployed, and topography.[4] First, a large part of the cost of the network is shared and subject to significant economies of density and/or scale. As the Commission has noted repeatedly, "a lower population density generally indicates a higher cost area."[5] The fixed costs associated with deploying telecommunications services are generally high in comparison to the incremental (marginal) costs; this means that each customer in an area where there are fewer consumers must bear a higher portion of the network's fixed cost. Accordingly, the Government Accountability Office ("GAO") found that "[t]he most frequently cited cost factor affecting broadband deployment was the population density of a market," and that "the cost of building a broadband infrastructure in areas where people live farther apart is much higher than building infrastructure to serve the same number of people in a more urban setting."[6]

Second, sparsely settled areas will also result in higher costs because facilities must be constructed over far longer distances to reach end users. The distances between individual end users and the carrier's need to aggregate a critical mass of traffic in a single switch often necessitate the use of particularly long loops, increasing costs dramatically. Accordingly, the Commission has stated that "for universal service purposes … cost differences caused by differing loop lengths are the most significant cost factor."[7]

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[4] This is true for all technologies, although the actual investments needed and the relative efficiencies of different technologies may differ from place to place.

[5] *Federal-State Joint Board on Universal Service; North Carolina RSA 3 Cellular Telephone Company; Petition for Designation as an Eligible Telecommunications Carrier in the State of North Carolina*, CC Docket No. 96-45, Order, 21 FCC Rcd 9151 ¶ 23 (2006).

[6] Government Accountability Office, *Broadband Deployment Is Extensive throughout the United States, but It Is Difficult to Assess the Extent of Deployment Gaps in Rural Areas* at 19 (May 2006) ("*GAO Report*").

[7] *Federal-State Joint Board on Universal Service (Forward-Looking Mechanism for High Cost Support for Non-Rural LECs)*, CC Docket No. 96-45, Fifth Report & Order, 13 FCC Rcd

Finally, the topography of an area can also make it difficult to provide affordable service by making it more costly to deploy networks (whether wired or wireless), as the Commission has also noted.[8] Accordingly, the GAO found that "terrain was also frequently cited as a factor affecting broadband deployment decisions," because "infrastructure build-out can be difficult in mountainous and forested areas because these areas may be difficult to reach or difficult on which to deploy the required equipment."[9]

The Joint Board should also recognize that many carriers are required to provide carrier-of-last-resort service (at rates well below cost) in high-cost areas without receiving sufficient and predictable universal service support. For example, Embarq serves predominately rural areas. Most of Embarq's study areas contain a combination of higher- and lower-cost areas. Therefore, like many other carriers, the cost challenges that accompany Embarq's carrier-of-last-resort obligations in rural areas are often masked from universal service support mechanisms because the need for support is calculated based on study areas averages. This is because serving both metropolitan and rural areas within the same study areas will produce lower reported average costs. It does not ameliorate the cost of deploying telecommunications services or broadband in rural areas, however, because competition in metropolitan areas forces prices and revenues to reflect the lower average costs.

Competition has grown rapidly in Embarq's lower-cost, more urban markets since 1996, however, eroding the implicit subsidies that the current system relies on for universal service Today, rate averaging in some study areas does not produce enough contribution margin to cover

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21,323, 21,355 ¶ 75 (1998)

[8] *See, e.g.*, *Access Charge Reform*, CC Docket No. 96-262, Notice of Proposed Rulemaking, 11 FCC Rcd 21354, 21370 ¶ 28 (1996).

[9] *GAO Report* at 19. Topographical concerns also impact the costs of terrestrial wireless providers and hinder the use of satellite communications. *Id.*

the cost of service in less densely-populated areas. In fact, the practice is harming the universal service concept in those areas by creating price umbrellas under which competitors not subject to carrier of last resort obligations can target the customers in low-cost areas. Therefore, as a result of increased competition and the fact that implicit subsidies have been competed away in the marketplace, the Commission should incorporate into its USF reform the option of using a more granular approach to demonstrate the need for support.

C. The Public Interest Would Be Well Served by Permitting, but Not Requiring, ETCs to Demonstrate and Calculate the Need for Support Using GIS Technology and Network Cost Modeling Rather than Study Area Averaging

Once it is understood that the Commission should make available the option of using a more granular approach to demonstrate the need for USF, the question becomes: Are GIS and cost modeling the best tools to use to achieve this increased granularity? The answer that the Joint Board should adopt is that GIS represents the most accurate of a variety of methods by which this granularity could be achieved. Another method could involve using the Commission's existing network cost model, the Synthesis Model (or "HCPM") to identify high-cost areas at a more granular level. The range of available methods is discussed in detail below.

Under the proposed TS program, carriers choosing to seek targeted support would have their costs calculated using network cost modeling but this would differ from past experience with cost modeling in two significant ways: (1) companies would have the option not to rely on the use of models by choosing not to pursue funding through this approach; and (2) in 2007 network cost models are substantially more accurate and in-tune with real-world network costs than was the case in the past. The fact that companies would have the option whether or not to use models is significant. This is consistent with the uncontroversial use of models in

telecommunications today, such as permitting but not requiring small, rate-of-return carriers to use the average schedule (which is a form of model) for rate regulation and USF purposes.

In general, companies generally do not keep their records and accounts at a sufficiently granular level to be able to use actual costs (or book costs) to calculate the need for support below the study area level. However, the use of a cost model does not completely *preclude* the use of actual costs.[10] Of course, by making this more granular approach optional (for any company that chose to submit cost data for evaluation, as described above in footnote 3), many companies' concerns regarding the use of cost models would be alleviated, since no company would be required to have its support calculated using a model (unless it already is calculated that way under the status quo). In fact, if the Joint Board were to recommend that the Commission make increased granularity optional, its overall task evolves to a much less controversial undertaking. Since any increase in granularity represents a major improvement over the status quo, the Joint Board need simply recommend how best to use a model—and possibly GIS technology—to achieve this increased granularity by weighing the costs and benefits of various alternatives.

The Commission's existing model, the Synthesis Model, represents one end of the spectrum of possible alternatives for calculating the need for support at a more granular level and has the benefit of being immediately available. In fact, the Synthesis Model in its current form is fully capable of producing cost results at a wire-center level for any company for which it has

[10] Results from a cost model could be used as a tool for de-averaging actual costs down to a wire center level, or even below. In the simplest sense, this de-averaging could take the form of a straightforward assumption: If a cost model identifies a wire center's forward-looking cost as three times the study area's average forward-looking cost, the wire center's actual cost would be identified as three times the study area's average actual cost, which would be taken from the company's books as it is today. By using such an assumption it is possible to achieve an increased level of granularity yet still retain a connection to actual costs.

data. Furthermore, with a relatively modest amount of effort the Synthesis Model is also capable of producing results at a sub-wire center level, such as inner-and outer zones for a given wire center. Embarq notes that using a sub-wire center level of granularity would be both more accurate and more effective at addressing insufficient support (because implicit subsidies exist not only across wire centers but within a single wire center.) However, Embarq also realizes that one of the key benefits to using the Synthesis Model would be its immediate availability as a tool. Clearly, making adjustments to the model so that it produced sub-wire center results would require a minimal amount of time and resources, but Embarq's costing experts estimate that the time required to make such changes could be measured in weeks.[11]

The next alternative available to the Joint Board would be to recommend one of several existing cost models currently used by firms in the industry (and recommend adaptations, as necessary).[12] In the Joint Board's recent *en banc* proceeding a significant amount of evidence was placed in the record regarding how cost models have improved since the adoption of the Synthesis Model. Many of these improvements are reflected in models that are currently available, including the use of GIS technology to identify customer locations, the use of extensive road data to replicate network routing, and the ability to produce cost estimates at an

[11] Currently the Synthesis Model produces investment dollars for a wire center which are converted to monthly costs per line per wire center by applying charge factors to the investment and adding expenses. The model also produces investment dollars for portions of wire centers (clusters) which can easily be placed into zones based on density. Establishing two zones per wire center based on density (high v. low, also available from the model) and then applying the same charge factors and expenses would create two distinct monthly costs per line per wire center, one for the higher density inner zone (or "donut hole"), the other for the less dense, outer zone (the "donut".) With adequate resources and adequate access to the Model, these changes could be implemented in a matter of weeks.

[12] Such available models include the CostPro, from CostQuest Associates, the HAI Model Version 5.3, recently filed in California by AT&T, and Embarq's own Economic Cost Model (EECM).

extremely granular level. Attachment 1 to these Comments, which is taken from the website of CostQuest Associates, sums up in a single "Then-and-Now" image the dramatic effect that these improvements have made on current models' ability to estimate the cost of building a network.[13] As an example, both CostQuest's CostPro Model and Embarq's own Economic Cost Model ("EECM") design network topology utilizing actual customer location data, actual demand data, real-world road data, real-world terrain characteristics, and efficient engineering in such a way as to produce a level of costing accuracy unimaginable only a few years ago.

Consequently, the overwhelming majority of criticisms that have been leveled against cost models have significantly less validity today than they did in the past.[14] Despite this fact, Embarq is aware that the use of cost models remains controversial for certain companies and other parties. This is why the above-mentioned optional nature of calculating support more granularly is so important.

The most extreme alternative available for the Joint Board to recommend to the Commission would be to create a new model from scratch, utilizing GIS technology for customer location data and incorporating all the advances referenced above. Embarq does not recommend this option, as the timeline for completing such a task would be longer than any of the other alternatives. In contrast, adopting and adapting an existing model could be done in a matter of months,[15]

[13] The image at bottom right of Attachment A represents a current model's network layout. The other images represent older models' network layouts.

[14] Those criticisms include claims that past models' lines differed significantly from actual lines, that route miles differed from actual route miles, that wire center boundaries and areas did not match actual boundaries and areas, etc. Some of these represent input (data) issues which are resolved through the use of GIS; others are network layout issues which are exactly the types of recent improvements that are discussed above.

[15] This is significantly shorter than the two-year timeframe mentioned in the recent Joint

With regard to the use of GIS technology, there is no question that any model will produce more accurate results if more accurate data is used as an input. It is a well established fact that, for ***any*** network technology, differences in costs are primarily driven by differences in customer location, which reflect differences in distance and density as well as differences in network engineering characteristics such as carrier serving area (CSA) design. Furthermore, there is no question that using GIS technology to establish customer locations would provide the Commission with the most accurate foundation upon which to calculate the need for support. The only question facing the Joint Board is whether the benefits of using GIS technology outweigh the costs. In that respect, the optional nature of any granular calculation can help significantly to defray the costs.

As stated above, the problems created by the continued use of study area averages are significant for the subset of companies whose service areas exhibit significant variation in costs. To the extent that the Joint Board wishes to recommend that the Commission utilize GIS technology in its calculation of more granular support, the companies opting for such an alternative can (and should) be obligated to assist in the process by providing the customer location data necessary to make use of the technology.[16] Since no company would be obligated to opt for more granular support, no company would be obligated to incur the costs associated with developing the data needed to provide such support.

Board en banc proceeding by Jim Stegeman of CostQuest Associates. See presentation of Jim Stegeman of CostQuest Associates, Joint Board ***en banc*** Proceeding, February 20, 2006. A significant portion of that two year time frame included time for acquiring, developing, cleaning and preparing input data. As discussed below in the body of these comments, the data needs for the optional Targeted Support program would be met in part by carriers, significantly shortening the estimated time frame.

[16] Understanding the competitively sensitive nature of such data, the data would be maintained as confidential at the company's request.

Once the Joint Board has chosen an alternative to produce more granular cost estimates, estimating the need for support is a straight-forward process of applying whatever benchmark is used (existing or new) to the cost data to calculate support. As described in Embarq's April 12th *ex parte* filing, providing more granular support to areas that have been insufficiently supported by the status quo can be accomplished without increasing the size of the fund.[17]

II. THE CURRENT REVERSE AUCTION PROPOSALS FAIL TO ADDRESS ONE OR BOTH OF THE CORE STRUCTURAL PROBLEMS THAT MUST BE RESOLVED FOR HIGH-COST REFORM TO SUCCEED.

The Joint Board seeks comment on the specific auction proposals filed by Verizon and CTIA in this docket, and asks:

> how such an auction would be designed, what would be the geographic scope of the area to be auctioned, how the reserve price would be set, what obligations, including carrier of last resort, would be imposed on the auction winner or (winners), how to ensure affordable and reasonably comparable rates, and other issues related to using reverse auctions to calculate and distribute high-cost support.[18]

The Joint Board also seeks "comment on whether any auction proposal should include an affordability benchmark."

Embarq submits that Verizon's auction proposal addresses one of the structural problems identified above, but fails to address the other. It ignores the problem of non-existent support in many high-cost areas where it is truly needed. But it does suggest that reverse auctions for wireless providers may offer benefits by reducing redundant support provided to multiple CETCs

[17] *See* Letter from Jeffrey Lanning, Embarq, to Deborah Tate, FCC and Ray Baum, Or. Pub. Serv. Comm'n, WC Docket No. 05-337 filed April 12, 2007

[18] Public Notice, *Federal-State Joint Board On Universal Service Seeks Comment On Long Term, Comprehensive High-Cost Universal Service Reform*, WC Docket No. 05-337, __ FCC Rcd ____, FCC 07J-2A1 ¶ 4 (May 1, 2007) (May 1 Public Notice).

in a single area. CTIA's auction proposal fails to resolve either of the core structural problems with high-cost support and it should be rejected.

A. Verizon's Auction Proposal Fails to Address the Problem of Non-Existent Support in Many High-Cost Areas Where It Is Truly Needed

Any high-cost reform proposal must be considered as part of a larger overall reform plan that addresses both of the core problems identified above: excessive support in some areas, insufficient support in others. Based on this criterion, Verizon's reverse auction proposal—although it does include certain concepts worthy of consideration—ultimately fails the test.[19] Setting aside the fact that Verizon's filing omits important details on fundamental implementational questions (such as the actual obligations of any auction winner and the commensurate removal of any obligations on any auction loser), the proposal as filed operates under an incorrect assumption that existing support levels—as they are currently calculated—provide sufficient support for all areas.

Despite making reference to conducting auctions at a more granular geographic level (wire centers) Verizon's proposal in fact perpetuates the existing system of using study area averages and unsustainable implicit subsidies by limiting support to no more than existing levels. Existing support is insufficient in many areas, however, and correcting this problem should be a priority for both the Joint Board and the Commission as they proceed with fundamental USF reform. The public interest will not be served by a system in such disrepair because there are too many high-cost areas that currently go without support, and the consequences of not providing adequate support are too great. That is not to say, however, that overall high-cost support

[19] *See* Letter from Kathleen Grillo, Verizon, to Deborah Tate, FCC and Ray Baum, Or. Pub. Serv. Comm'n, WC Docket No. 05-337 filed February 9, 2007 ("Verizon Ex Parte").…

necessarily must increase as some may fear because there are substantial savings to be had in other areas by fixing the structural problems with the current USF.

The first step in Verizon's proposal is to cap support for each study area at current levels, with separate caps based on wireless and wireline receipts. Unlike the Joint Board's currently-proposed cap on support to competitive eligible telecommunications carriers (CETCs), which is an interim measure, Verizon's proposal presents the cap as permanent. This is clear because Step Two of the proposal describes an ***auction reserve*** as a mechanism that "… ensures that the support determined by the auction is no greater than the amount of support provided prior to the auction …" and the purpose of the reserve is to "… ensure that the auction cannot result in an increase in support for any study area."[20] Accordingly, under Verizon's proposal, study areas that receive no support today would continue to receive no support going forward, despite the fact that many of those study areas contain regions that are extremely costly to serve.[21]

An additional important and undesirable effect of Verizon's proposal is also noteworthy: because no area can ever receive more support than it does now, a major part of the purported "benefit" of auctions is lost, in that there will never be interest among competitors in providing service to customers in high-cost areas that do not currently receive support due to study area averaging. Conversely, if the *need* for support were calculated at a more granular level (for example, at a wire center or sub-wire center level) then an auction process could—theoretically—operate as intended, by encouraging different carriers to compete for and win the

[20] *Id.*

[21] Under Verizon's proposal it is theoretically possible that support dollars could be distributed differently among wire centers than they are today, but this could only happen in a study area that currently received support. Furthermore, the dollars that would be distributed would continue to be based on study-area average costs, and would continue to reflect unsustainable implicit subsidies.

right to serve truly high-cost areas where they can do so more efficiently than current providers. Without this, it is questionable whether auctions would, on balance, serve the public interest.

B. Reverse Auctions For Wireless Providers May Offer Benefits By Reducing Redundant Support Provided To Multiple CETCs In A Single Area.

If it is possible for auctions to be an effective tool for achieving statutory goals, it will be primarily as a mechanism to address the problem of redundant support. Although Verizon's overall proposal, as filed, fails the basic test of adequately addressing both of the fundamental issues facing the Commission today, it is worth noting that one aspect of Verizon's plan does merit attention: Verizon proposes that separate auctions should be held for wireless and wireline providers. To the extent that the Joint Board considers an auction mechanism of *any* kind, it is logical and appropriate to separate out wireless and wireline providers, for numerous reasons. First and foremost, the redundant support going to multiple providers serving a single area that is primarily responsible for excessive fund growth is overwhelmingly a *mobile wireless* phenomenon. For example, according to data from the Universal Service Administration Company (USAC) there are currently six (6) different wireless CETCs receiving support dollars for providing service in the non-rural study area portions of Puerto Rico. These six wireless CETCs receive a combined $154 million annually for serving *the exact same study area*. Yet there is not a single purely wireline CETC serving that area. If the Joint Board wants to consider auctions as a means for reducing redundant support, auctions *among wireless providers* may accomplish the goal.[22]

[22] This example clearly illustrates the perverse incentives created by the existing mechanism, where six (6) competing networks are currently receiving support for serving an area where it is uneconomic for a single network to exist.

Equally importantly, another reason to consider auctions for wireless carriers only is that any auction involving wireline carriers must take into account the complicating factor of carrier-of-last-resort ("CoLR") obligations that (to date) only wireline carriers fulfill. Unlike every wireless CETC, incumbent wireline carriers are ***obligated*** to operate in the highest-cost areas. They are required to meet quality standards and service standards, operate under price regulation, and provide service to every customer who requests it.[23] If the Joint Board were to consider auctions involving incumbent wireline providers it would be forced to consider what would happen to these CoLR obligations should an incumbent wireline carrier "lose" an auction. It would also be forced to consider what would happen to other ILEC obligations (price regulation, service standards) if an incumbent carrier "lost" an auction. Verizon has avoided this difficult issue entirely in its proposal. A brief mention is made of the Commission "working with the states" to define a winning bidder's obligations. But no information was offered regarding a losing bidder's obligations.

Furthermore, the CoLR obligations of wireline carriers play an even more complicating role if the Joint Board were to consider—even briefly—Step Four of Verizon's proposal, in which wireline and wireless providers could potentially bid against each other. If the Joint Baord were to consider such a scenario, it would also be forced to consider the implications of a wireless provider "winning" the auction. In such a case, the incumbent provider could no longer be required (or even expected) to continue to offer service in the area. By awarding the support to a wireless carrier ***instead of*** an incumbent wireline carrier the Commission would, in essence, be requiring all customers in that area to choose wireless service as their primary—and perhaps only—service. And while "cord-cutting" is obviously a real and growing phenomenon, it is

[23] The specific wording of 47 CFR § 54.202.a.1.B allows wireless CETCs the luxury of not providing service to certain customers if it cannot be done "at reasonable cost".

highly questionable whether rural residents would appreciate having the choice made for them. It is also questionable whether rural customers would be comfortable knowing that, as a result of such an auction, their only choice for the supported services, including access to E911, was a technology known for such service problems as dropped calls and dead spots, which are prevalent in rural areas.

In summary, the possibility of implementing reverse auctions for wireless providers is worth serious consideration in terms of reducing redundant support provided to multiple CETCs in a single area. It has been documented in numerous instances, most notably in Chairman Kevin Martin's prepared remarks at the Joint Board's *en banc* proceeding, that redundant, wireless CETC support is the cause of excessive fund growth.[24] However, it is important to note that reverse auctions should be considered a specific tool that might serve as a potential solution to a specific problem (redundant support) rather than a panacea for all of the problems facing the current USF mechanism. Applied inappropriately or too broadly, reverse auctions would create more difficulties than they would resolve.

C. CTIA's Auction Proposal Fails to Resolve Either of the Core Structural Problems with High-Cost Support and It Should Be Rejected.

The Public Notice also requested comment on CTIA's reverse auction proposal.[25] As stated above, all proposals for reform must be evaluated within the context of the two fundamental problems identified earlier: redundant, excessive support in some geographic areas and insufficient support in other areas. Unlike Verizon's proposal, which addressed the

[24] Statement of FCC Chairman Kevin Martin Before the Federal-State Joint Board on Universal Service, (Feb. 20, 2007) (Martin *en banc* Statement).

[25] *See* Reply Comment of CTIA-The Wireless Association® WC Docket No. 05-337 (November 8, 2006) (CTIA Reply Comments).

redundant support problem but ignored the problem of insufficiency, CTIA's proposal fails to address either problem adequately.

CTIA's proposal includes its long-standing position that ILECs with multiple study areas in a state should combine those study areas. Such a proposal is antithetical to the goals of establishing an explicit, predictable and sufficient support mechanism because such a proposal exacerbates—rather than corrects—the insufficiency problems caused by study area averaging and reliance on implicit subsidies. To the extent that high-cost areas are unsupported today because their costs are masked by using study area averages, CTIA's proposal multiplies the likelihood of this masking taking place by assuming that carriers can continue to rely on implicit subsidies across study areas, as well as within study areas. To take CTIA's proposal to its (ill)-logical conclusion, Embarq asks: Why stop at a state's boundaries? Why not assume that a study area in one state can implicit subsidize high costs in another state? CTIA's proposal is, in sum, an explicit appeal to ***increase*** rather than decrease reliance on implicit support, which no longer exists in any event. In this way, CTIA's proposal is directly contrary to the statutory mandate for an ***explicit*** funding mechanism. Moreover, combining study areas, as proposed by CTIA, would simply amplify the insufficiency problem that exists in the fund today.

With regard to the problem of excessive, redundant support to multiple carriers serving a single area, CTIA's proposed "winner take more" version of a reverse auction does nothing to address this key issue. In fact, the purported advantage of a "winner take more" system—that it would prevent current recipients from possibly abandoning a territory that it currently serves—is highly questionable itself. By assuming a cessation of support would cause a carrier to abandon a territory, CTIA makes the ***de facto*** assumption that the ***availability*** of support is what caused the carrier to serve the territory in the first place. Given the preponderance of wireless ETC

applications in which the requested designated service area is identical to the carrier's existing coverage area (pre-support), this assumption is highly suspect. In summary, CTIA's proposal fails to adequately address either of the key issues facing the Joint Board as it considers fundamental USF reform.

III. CARRIERS SHOULD RETAIN THE OPTION TO DISAGGREGATE THEIR SUPPORT, BUT DISAGGREAGTION ALONE WILL NOT SOLVE EITHER OF THE CORE STRUCTURAL HIGH-COST SUPPORT PROBLEMS.

The Joint Board seeks comment on whether all carriers should be required to disaggregate support below the study area level. In the Public Notice the reasons suggested for making disaggregation mandatory are that, by doing so, it would ensure "… that a competitive entrant would receive the targeted support only if it also serves the high-cost regions" and at the same time it would prevent competitors "from receiving greater support than needed to serve relatively low-cost regions …." Embarq submits that the correct way to accomplish both these goals is by re-calculating and re-targeting support at a more granular level, as discussed above, rather than simply taking support amounts as they are currently calculated and distributing them differently. If the need for support is correctly identified at a granular level, and then distributed at that same granular level, the Joint Board will have ensured that any competitor receiving support is indeed serving the high-cost areas that required the support in the first place.

Disaggregation is different from, and not necessarily related to, using targeting to calculated the need for support more granularly and accurately in currently underfunded areas. The problem with straightforward disaggregation (as opposed to the re-calculation discussed above) is that disaggregation does not correct the fundamental problem of insufficient support; it simply takes inadequate amounts of support and allocates them differently. In a study area that

currently receives $0 of high-cost support due to study area averaging—despite containing many high-cost areas—mandatory disaggregation would simply amount to re-distributing nothing.

Although disaggregation does not solve either of the core USF structural problems facing the Joint Board, carriers should be permitted to disaggregate support if they choose. Where supported service areas do not exhibit significant variation in costs, carriers may not be disadvantaged by the current practice of using study area averages. Those carriers may not choose to have their support re-calculated at a more granular level. In that case, those carriers, and customers in those markets, could benefit from an ongoing, and more usable, option of disaggregating support. Doing so would more closely align economic costs and market incentives, which would facilitate efficient competition and, thereby, benefit consumers.

IV. THE JOINT BOARD SHOULD RECOMMEND THE ELIMINATION OF THE "IDENTICAL SUPPORT" RULE

The Public Notice seeks comment on whether the Commission's "identical support" rule—under which CETCs receive support based on incumbent carriers' costs rather than their own costs—should be eliminated. In the past, CETCs (primarily wireless carriers) have argued that identical support is necessary to maintain the "competitive neutrality" aspect of universal service funding. For example, wireless carriers have made arguments claiming that they should receive the same support as ILECs so that they can compete on the basis of lower prices in areas where they do have cost advantages. Putting aside for the moment the fact that alleged wireless cost advantages are often the product of regulation—wireless carriers are free to avoid serving high-cost areas unlike ILECs—the cost competition argument for the identical support rule falls apart upon inspection. A key component of the argument is that prices charged by the wireless carrier reflect USF support amounts; this is the basis for suggesting that non-identical support

could cause market distortions. The reality is that prices charged by wireless carriers do *not* reflect USF support amounts. If they did, we would witness a systematic adjustment of prices state-by-state as new CETC applications were granted to wireless carriers and USF support dollars flowed over the past several years. No such adjustments exist. Therefore there is no basis to the non-competitive neutrality argument put forth by these carriers.

True competitive neutrality requires that universal service support only go to compensate carriers for providing service in those areas where they would not otherwise go because it is uneconomic to do so. Competitive neutrality will be violated and, ultimately, the entire system of universal service will unravel if competitive ETCs are able to receive comparable support without incurring comparable service obligations across comparable geographical areas, which is precisely what CETCs do. The USF system is designed to work when all ETCs are compensated only for providing service where it is not economically feasible to do so otherwise, and at rates that do not cover the costs of providing service. A corollary of this point is that, where a competitive ETC is not using its own network to provide service throughout the same geographic area as the ILEC, it is not incurring the same carrier of last resort obligations as is the ILEC. In these circumstances, a competitive ETC may be reaping a windfall by collecting support solely for providing service where it could do so without support.

On a more fundamental level, the basic notion behind USF support is that it exists to ensure that rates for supported services remain affordable. This connection to affordability incorporates an implicit acknowledgement that the costs incurred in providing the services would—absent support—make the service unaffordable for the end-user. There is no reason to assume that the costs incurred by an incumbent wireline carrier as it provides the supported

services have any relationship to the affordability—or lack thereof—of wireless service. Therefore there is no logical basis to providing support to wireless carriers based on ILEC costs.

V. THE COMMISSION CAN ACCELERATE AND EXTEND BROADBAND DEPLOYMENT WITH TARGETED SUPPORT.

The Joint Board should recommend that the Commission can and should do substantially more to facilitate broadband deployment. In particular, the Commission should identify and direct support to the underlying networks that serve high-cost areas where broadband deployment is not economically feasible when left to market forces. The Chairman has clearly explained that such support should focus on a single network rather than on the separate policy of promoting competition. Moreover, serious analysis of the incremental cost of deploying broadband will reveal that it is often the legacy telecommunications network that offers the most economical platform that requires the least additional support for broadband deployment in uneconomic, high-cost areas. The Joint Board can, therefore, best promote broadband deployment by recommending fundamental universal service reform creating adequate support for underlying telecommunications networks.

Broadband infrastructure supports the nation's economic health. The increased availability of such infrastructure is part of the connective tissue that binds our national resources to our market economy. Many industries, such as agriculture, mining, manufacturing, and tourism would produce less, and would be less viable in many places, without, high-quality, and affordable broadband services. Similarly, businesses and individuals in high-cost areas would be unable to participate as fully in our economy as producers and consumers of goods and services. The increased availability of critical infrastructure facilitates and supports innovation and investment in the human resources that are essential for our economic future. As information

processing becomes an increasingly central aspect of our economy, we simply cannot afford to leave parts of our country disconnected.

Broadband infrastructure also supports homeland security. The goal of protecting our society is not achievable if those living in high-cost areas are disconnected from society as a whole. It is impossible to protect our country against terrorism or criminal activity if there are substantial land areas that are isolated from our critical road, electrical, and communications infrastructures. Similarly, increased availability of high-quality, affordable broadband services facilitates our local and national responses to natural disasters, such as hurricanes. As Chairman Martin wrote last year when announcing the creation of the Commission's Homeland Security Bureau, "[t]he events of September 11th, 2001 and last year's Hurricane season underscored America's reliance on an effective national telecommunications infrastructure."[26]

Finally, more extensive broadband offerings benefit everybody, including those living in low-cost regions, because they expand contact with others who might otherwise remain unconnected. As economists note, in fields subject to "network effects," goods or services are more valuable to each customer when other customers also use them.[27] The more people and places we can call, the more we can rely on broadband and the more valuable the network becomes for each of us.

Therefore, the Joint Board and the Commission should focus their energies in the first instance on conducting a granular study identifying the truly high-cost areas to serve. This would

[26] *Establishment of the Public Safety and Homeland Security Bureau And Other Organizational Changes*, Order, 21 FCC Rcd 10867 (separate statement of Chairman Kevin J. Martin) (Sep. 25, 2006).

[27] *E.g.*, Joseph Farrell & Garth Saloner, *Standardization, Compatibility, and Innovation*, 16 RAND Journal of Economics 70 (Spring 1985); Michael L. Katz & Carl Shapiro, *Network Externalities, Competition, and Compatibility*, 75 American Economic Review 424 (Jun. 1985).

serve as an effective tool for identifying areas where it is uneconomic for the market to deploy broadband. The Commission's long-stated goal of advancing broadband deployment—whether as a supported service or not—requires a comprehensive understanding of the geographic hurdles (density, distance, absence of critical mass of consumers) and incremental investment needs that currently providers face as they bring advanced services to the most rural, high-cost areas.

VI. CONCLUSION

In sum, (1) the Joint Board should recommend the creation of an option of a new targeted support (TS) program for underfunded high-cost areas using geographic information system (GIS) technology and network cost modeling; (2) some aspects of reverse auctions may indeed help with USF reform, but the current reverse auction proposals fail to address one or both of the core structural problems that must be resolved for high-cost reform to succeed; (3) carriers should retain the option to disaggregate support, but disaggregation alone will not solve either of the core structural high-cost support problems; (4) the Joint Board should recommend elimination of the "identical support" rule; and (5) the Joint Board should recommend that the Commission accelerate and extend broadband deployment with targeted support.

Respectfully submitted,

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Attachment A